Sheet

PTO/SB/08A (08-03) Approved for use through 07/31/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

work Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Under use : Fa.

RASubstitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Col	mplete if Known	•
Application Number	10/667,542	
Filing Date	09/22/03	
First Named Inventor	Manuel Fahndrich	
Art Unit	Unknown	
Examiner Name	Unknown	
Attemou Docket Mumber	MS304414 1/MSETP464US	_

U. S. PATENT DOCUMENTS Pages, Columns, Lines, Where Publication Date Name of Patentee or **Document Number** Examiner Relevant Passages or Relevant Applicant of Cited Document MM-DD-YYYY Figures Appear Number-Kind Code² (f known) US- 6,560,774 05-06-2003 Gordon, et al. MY 08-08-2002 Muhlestein et al. US- 2002/0108102 US- 2002/0004815 01-10-2002 Muhlestein et al. 08-14-2001 ^{US-} 6,275,938 Bond, et al. 05-08-2001 Gerard, et al. ^{US-} 6,230,311 06-20-2000 Haley, et al. US-6,079,031 MY US-LIS-US-USus-US-US-US: US-US-ับร-บระ

		FORE	IGN PATENT DOCU	MENTS		
Examiner Initials*	Cite No.	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	٦
maiora	1.0.	Country Code ³ "Number ⁴ "Kind Code ⁸ (# known)	MM-DD-YYYY		Or Relevant Figures Appear	T°
•	1					L
	 					
						
	+					Г
-	 					1

			 	
Examiner		1.11	Date	1 100 1
Signature	Midal/	yighall	Considered	1/29/07
Signature	Michael	<i>(</i>		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. *Applicant's unique citation designation number (optional). *See Kinds Codes of USPTO Patent Documents at www.uspio.gov or MPEP 901.04. *Senter Office that issued the document, by the two-letter code (WIPO Standard ST.3). *For Japanese patent documents, the Indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Mind of document by the appropriate symbols as Indicated on the document under WIPO Standard ST.16 if possible. *Applicant is to place a check mark here if English language

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form end/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PTO/SB/088 (08-03)

Approved for use through 07/31/2006. OMB 0851-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Paperwork Reduction Act of 1995, no persons are required to respond to a collection of Information unless it contains a valid OMB control number.

Complete if Known

THE TORMATION DISCLOSURE STATEMENT BY APPLICANT

Substitute (or form 1449/PTO

Sheet

(Use as many sheets as necessary)

of

2

Application Number 10/667,542 Filing Date 09/22//03 First Named Inventor Manuel Fahndrich Art Unit Unknown **Examiner Name** Unknown 1 Attorney Docket Number MS304414.1/MSFTP464US

_	1000	NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of	
Examiner Initials*	Cite No. ¹	the Item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
MY		ROBERT DELINE et al., The Fugue protocol checker: Is your software Baroque?, OOPSLA'03, 2003, pp. 1-15, Anaheim, California.	
		C. FLANAGAN et al., Extended Static Checking for Java, PLDI'02, 2002, pp.234-245, Berlin, Germany.	
		JEREMY W. NIMMER et al., Invariant Inference for Static Checking: An Empirical Evaluation, SIGSOFT 2002/FSE-10, 2002, pp. 11-20, Charleston, South Carolina.	
		MANUEL FAHNDRICH et al., Non-null types in an object-oriented language, Microsoft Research, 2002, 10 pages, Redmond, Washington.	
		KJETIL MAGE, A Practical Application of the Object Constraint Language OCL, Agder University College, 2002, 8 pages.	
		ROBERT DELINE et al., Enforcing High-Level Protocols in Low-Level Software, PLDI 2001, 2001, 11 pages, Snowbird, Utah.	
		JAKOB REHOF et al., Type-Based Flow Analysis: From Polymorphic Subtyping to CFL-Reachability, Proceedings POPL 01, 2001, 13 pages, London, England.	
		ERIK MEIJER et al., Technical Overview of the Common Language Runtime, 2000, 11 pages, Redmond, Washington.	
		ZHICHEN XU et al., Safety Checking of Machine Code, PLDI 2000, 2000, pp.70-82, Vancouver, British Columbia, Canada.	
MY		ALEXANDER AIKEN et al., A Toolkit for Constructing Type- and Constraint-Based Program Analyses, Proceedings of the Second International Workshop on Types in Compilation, 1998, 19 pages, Kyoto, Japan.	

Examiner		yadall	Date	
Signature	Mechael	ggan	Considered	1/29/07

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. Applicant's unique clation designation number (optional). Applicant is to piace a check mark nere if English tanguage i ranstation is structed. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08b (08-03) Approved for use through 06/30/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

er the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known Application Number 10/667,542 Filing Date September 22, 2003 First Named Inventor Manuel Fahndrich Art Unit 2661 Examiner Name Unknown Attorney Docket Number

MS304414.1/MSFTP464US

(Use as many sheets as necessary)

Sheet 2

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
MY		T. BALL and S.K. RAJAMANI. Automatically Validating Temporal Safety Properties of Interfaces. In SPIN 2001, Workshop on Model Checking of Software, LNCS 2057, pp. 103-122, 2001.	
		C. BOYAPATI, et al. Ownership Types for Safe Programming: Preventing Data Races and Deadlocks. In Proc. of the 17th Conference on Object-Oriented Programming, Systems, Languages, and Applications. ACM Press, 2002. 20 pages.	
		W.R. BUSH, et al. A Static Analyzer for Finding Dynamic Programming Errors. Software- Practice and Experience, Vol. 30, pp. 775-802, 2000.	
***************************************	**************	M. DAS, et al. ESP: Path-sensitive Program Verification in Polynomial Time. In PLDI '02, 2002. 12 pages.	
	***************************************	K. CRARY, et al. Typed Memory Management in a Calculus of Capabilities. In Conference Record of the 26th Annual ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, ACM Press, 1999. 14 pages.	
		M. FAHNDRICH and R. DELINE. Adoption and Focus: Practical Linear Types for Imperative Programming. In PLDI '02, 2002. 12 pages.	
		C. FLANAGAN and S.N. FREUND. Type-based Race Detection for Java. In Proc. of the 2000 ACM SIGPLAN Conference on Programming Language Design and Implementation, pp. 219-232, 2000.	
		A.D. GORDON and D. SYME. Typing a Multi-language Intermediate Code. In Conference Record of the 28th Annual ACM Symposium on Principles of Programming Languages, pp. 248-260, ACM Press, 2001.	
		S. HALLEM, et al. A System and Language for Building System-specific, Static, Analyses. In PLDI '02, 2002. 14 pages.	
MY		Proceedings of the 2002 ACM SIGPLAN Conference on Programming Language Design and Implementation, June 2002. 2 pages.	ļ

Examiner Signature Michael Yightell	Date Considered	1/29/07
-------------------------------------	--------------------	---------

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Examiner

PTO/SB/08b (08-03) Approved for use through 06/30/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO Complete if Known Application Number SUPPLEMENTAL 10/667,542 INFORMATION DISCLOSURE Filing Date September 22, 2003 First Named Inventor STATEMENT BY APPLICANT Manuel Fahndrich Art Unit 2661 (Use as many sheets as necessary) Exeminer Name Unknown Sheet Attorney Docket Number MS304414.1/MSFTP464US 2 2

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
MΥ		R.E. STROM and S. YEMINI. Typestate: A Programming Language Concept for Enhancing Software Reliability. IEEE Transactions on Software Engineering, Vol. SE-12 No. 1, pp. 157-171, 1986.	
•			
	***************************************		ļ
	······		
*************************			ļ
		·	

*****************	·		
	***********		ļ

			L

Michael yighall 1/29/07 Signature Considered

Date

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Oraw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.